REMARKS

Amendment H is hereby provided after careful consideration of the Examiner's comments set forth in the Office Action mailed July 21, 2008. Claims 2-20 remain in the application after Amendment H is entered. Reconsideration of the application is respectfully requested in view of the amendments and remarks provided herein.

The Office Action

Claims 2, 4, 10, 11, 15, and 16 stand rejected under the judicially-created doctrine of nonstatutory obviousness-type double patenting for allegedly not being patentably distinct over claims 6, 7, 9-11, 16, and 17 of U.S. Patent No. 6,915,477 to Gollamudi et al.

Claims 2, 4, 10, and 16 stand rejected under 35 U.S.C. § 102(e) for allegedly being anticipated by U.S. Patent Application Publication No. 2005/0054296 to Chuang et al.

Claims 7 and 17-20 stand rejected under 35 U.S.C. § 103(a) for allegedly being obvious over Chuang and the Examiner's allegation that certain features are either inherently disclosed in Chuang or well known in the art (i.e., Examiner's Notice).

The Office Action Summary (PTOL-326) indicates that claim 5 is rejected. However, the Detailed Action section of the Office Action does not state grounds or discuss rejection of claim 5.

Claims 3, 6, 8, 9, and 11-15 are identified as dependent claims that would be allowable if placed in independent form.

The Art Rejections

Rejection of Claims 2, 4, 10, 11, 15, and 16 on Nonstatutory Double Patenting Grounds are Overcome by Terminal Disclaimer.

Claims 2, 4, 10, 11, 15, and 16 were rejected under the judicially-created doctrine of nonstatutory obviousness-type double patenting over claims 6, 7, 9-11, 16, and 17 of the Gollamudi patent (U.S. Pat. No. 6,915,477). The instant application (ASN 10/033,338) and the Gollamudi patent are both assigned to Lucent Technologies, Inc of

Murray Hill, New Jersey. The assignment for the instant application was recorded with the USPTO at reel/frame 012758/0461 on March 26, 2002. The assignment for the Gollamudi patent was also recorded with the USPTO on March 26, 2002 at reel/frame 012758/0480. A Terminal Disclaimer (PTO/SB/26) accompanies this amendment to obviate the nonstatutory double patenting rejections and indicates that Lucent Technologies owns 100 percent interest in the instant application. Based at least on the foregoing, the Applicant submits that the nonstatutory double patenting rejections of claims 2, 4, 10, 11, 15, and 16 are overcome and respectfully requests that the rejections on these grounds be withdrawn.

Claims 2, 4, 10, and 16 Patentably Distinguish Over Chuang.

Independent claim 2 is directed to an adaptive quality control loop that includes "adjusting a first channel condition threshold based on a first error detection result ... using a first variable size step, ... the first channel condition threshold based on a first modulation and coding scheme (MCS) level ... and the first variable size step is determined using a desired MCS error rate."

Chuang discloses an infinite retransmission model for analysis of link adaptation in a retransmission environment (see para. 28-43) and a method for deriving threshold values for the infinite retransmission model (see para. 44-55). The Chuang retransmission model considers total traffic load (i.e., ρ) in a communication system to include an offered load (i.e., (ρ_O) plus traffic generated by retransmissions (i.e., p(n)) (see para. 33). The Chuang model defines the signal-to-interference ratio (SIR) (i.e., error detection result) at a receiver as SIR of the offered traffic (i.e., SIR_O) plus an "SIR margin" (i.e., $C(\rho)$) corresponding to a reduction to the SIR due to retransmissions (see para. 40-41).

SIR, SIR_O, and "SIR margin" are expressed in terms of the block error rate (BLER) for a modulation/coding mode in the Chuang model (see para. 34-41). The Chuang model uses $BLER_n$ to indicate the block error rate for modulation/coding mode n (see para. 34). $BLER_n$ is a function of SIR in the Chuang model (see para. 36). Using approximation techniques, the Chuang model simplifies calculation of the "SIR margin" (i.e., $C(\rho)$) to the difference between SIR and SIR_O (see para. 43-49). Using the

approximate "SIR margin," the Chuang model can calculate thresholds for the link adaptation system with the infinite transmission model by shifting characteristic curves derived from a no-retransmission model (see para. 50). Chuang discloses that the thresholds for the infinite transmission model can be obtained by subtracting the "SIR margin" (i.e., $C(\rho)$) from the thresholds for the no-retransmission model (see para. 50).

In summary, Chuang discloses that SIR can be used to obtain thresholds for a modulation/coding mode in a retransmission environment by subtracting an SIR margin from thresholds for the modulation/coding mode in a no-retransmission environment. $BLER_n$ is a function of SIR and used at intermediate stages to determine the SIR margin. Notably, Chuang does not disclose or fairly suggest adjusting thresholds where a variable size step is determined using a desired MCS error rate as recited in claims 2. In particular, the Chuang SIR margin is a derived characteristic based on an error detection result (e.g., SIR and BLER). Use of the Chuang SIR margin to adjust thresholds in link rate adaptation is fundamentally different from the use of the "desired MCS error rate" for rate adaptation as recited in claim 2. Based at least on the foregoing, the Applicant respectfully submits that claim 2 and claims dependent thereon (e.g., claims 4-10 and 16-20) are currently in condition for allowance.

Claim 4 depends from claim 2 and adds the limitation that the "desired MCS error rate ... is based on a block error rate target criterion." In addition to the arguments above distinguishing claim 2 from Chuang, the block error rate (e.g., $BLER_n$) used in Chuang is a derived characteristic of an error detection result. This is fundamentally different from use of the "block error rate target criterion" for rate adaptation as recited in claim 4. Based at least on the foregoing, the Applicant respectfully submits that claim 4 is patentably distinguished from Chuang and currently in condition for allowance for these additional grounds.

Claim 10 depends from claim 2 and adds the element "determining the first variable size step using a block or bit error rate target criterion." In addition to the arguments above distinguishing claims 2 and 4 from Chuang, Chuang does not disclosure or fairly suggest any aspect of using bit error rate target criterion to adjust any threshold associated with rate adaptation as recited in claim 10. Based at least on the foregoing, the Applicant respectfully submits that claim 10 is patentably

distinguished from Chuang and currently in condition for allowance for these additional grounds.

Claims 7 and 17-20 Patentably Distinguish Over the Combination of Chuang and Examiner's Official Notice.

Claims 7 and 17-20 depend from claim 2. Accordingly, claims 7 and 17-20 are patentably distinct from the combination of Chuang and Examiner's Official Notice for at least the same reasons provided above distinguishing claim 2 from Chuang.

Additionally, claim 7 adds the limitation that the "desired MCS error rate ... is based on a bit error rate target criterion." In addition to the arguments above distinguishing claim 2 from Chuang, the block error rate (e.g., $BLER_n$) used in Chuang is a derived characteristic of an error detection result. This is fundamentally different from use of the "bit error rate target criterion" for rate adaptation as recited in claim 7. Moreover, Chuang does not disclosure or fairly suggest any aspect of using bit error rate target criterion to adjust any threshold associated with rate adaptation.

The Applicant respectfully submits that one of ordinary skill in the art would not clearly recognize using "bit error rate target criterion" as recited in claim 7 from Chuang's derivation of the $BLER_n$ characteristic from the SIR error detection result. Therefore, the Examiner's Official Notice regarding the use of "bit error rate target criterion" for rate adaptation in claim 7 is not appropriate. Based at least on the foregoing, the Applicant respectfully submits that claim 7 is patentably distinguished from Chuang and currently in condition for allowance for these additional grounds.

The Allowable Subject Matter

Claim 3 is Placed in Independent Form.

Claim 3 was identified as a dependent claim that would be allowable if placed in independent form. Claim 3 previously depended from claim 2. As amended, claim 3 incorporates the limitations of base claim 2. Accordingly, the Applicant respectfully submits that claim 3 is currently in condition for allowance.

Claim 5 Contains Allowable Subject Matter.

The Office Action Summary (PTOL-326) indicates that claim 5 was rejected. However, the Detailed Action section of the Office Action does not state grounds or discuss rejection of claim 5. A review of the prosecution history reveals that the sole grounds for previous rejections of claim 5 were nonstatutory obviousness-type double patenting over U.S. Patent No. 7,161,956 to Gollamudi et al. This rejection was overcome by a Terminal Disclaimer filed October 22, 2007. It appears that dependent claim 5 is now directed to allowable subject matter and that the Office Action Summary (PTOL-326) erroneously indicates this rejection. If this is not correct, the Applicant requests that the Examiner state specific reasons for rejection of claim 5 in the next Office Action.

Claim 11 is Placed in Independent Form.

Claim 11 was identified as a dependent claim that would be allowable if placed in independent form. Claim 11 previously depended from claim 2. As amended, claim 11 incorporates the limitations of base claim 2. Accordingly, the Applicant respectfully submits that claim 11 and claim dependent thereon (i.e., claims 12-15) are currently in condition for allowance.

CONCLUSION

For the reasons detailed above, it is respectfully submitted all claims remaining in the application (Claims 2-20) are now in condition for allowance. The foregoing comments do not require unnecessary additional search or examination.

In the event the Examiner considers personal contact advantageous to the disposition of this case, he/she is hereby authorized to telephone Alan C. Brandt, at (216) 861-5582.

Respectfully submitted,

Fay Sharpe LLP

October 20, 2008
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Certificate of Electronic Transmission

I hereby certify that this Amendment and accompanying documents are being filed on the date indicated below by electronic transmission with the United States Patent and Trademark Office via the electronic filing system (EFS-Web).

October 20, 2008
Date

Georgeen B. Sonntag

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